

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-4. (Cancelled)

¹
~~5.~~ (Previously Presented) A method of bounding latency of transmissions by stations on a shared access medium comprising:

associating one of multiple priority levels with a transmission; and

controlling the amount of time the transmission occupies the shared access medium based on the associated priority level,

wherein the transmission is a burst transmission of frames and wherein controlling comprises:

providing the burst transmission with control of the medium at the associated priority level, and

wherein providing comprises: providing in all but the last of the frames in the burst transmission a contention control indicator for indicating contention-free access and providing in all of the frames in the burst transmission the associated priority level so that the burst transmission may be interrupted by another of the stations having a pending frame with a higher priority level than the associated priority level.

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~~6.~~ (Original) The method of claim ¹~~5~~, further comprising:
relinquishing control of the shared access medium when such pending frame is detected between transmissions of the frames in the burst transmission.

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~~7.~~ (Original) The method of claim ²~~6~~, further comprising:

resuming the burst transmission after successfully contending for access to the shared access medium.

~~4~~ 8. (Original) The method of claim ~~5~~, wherein the frames of the burst transmission comprise segments of a segmented MAC service data unit.

B1 [9-12. (Cancelled)

~~5~~ 13. (Previously Presented) A media access control unit for bounding latency of transmissions by stations on a shared access medium comprising:

a transmit handler to associate one of multiple priority levels with a transmission and to control the amount of time the transmission occupies the shared access medium based on the associated priority level,

wherein the transmission is a burst transmission and the transmit handler comprises:

a segmentation unit for segmenting a MAC service data unit into segments for transmission in frames on the shared access medium in the burst transmission; and

a frame transmit unit for providing segments in frames in the burst transmission at the associated priority level, and

wherein the frame transmit unit provides a set contention control indicator for indicating contention-free access in all but the last of the frames in the burst transmission and provides in all of the frames in the burst transmission the associated priority level so that the burst transmission may be interrupted by another of the stations having a pending frame with a higher priority level than the specified priority level.

~~6~~ 14. (Original) The media access control apparatus of claim ~~13~~⁵, further comprising:
wherein the frame transmit unit relinquishes control of the shared access medium when such pending frame is detected between transmissions of the frames in the burst transmission.

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~~15~~. (Original) The media access control apparatus of claim ~~14~~, further comprising:
wherein the frame transmit unit resumes the burst transmission after successfully
contending for access to the shared access medium.

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~~16~~. (Original) A method of reducing latency of transmission by stations on a shared
access medium, the method comprising

having a first station begin a burst transmission of frames;

associating one of multiple priority levels with the burst transmission;

providing an inter-frame contention phase between frames;

during the inter-frame contention phase, having the first station signal the priority level of
the burst transmission and signal that the first station desires contention-free access to complete
the burst transmission;

during the inter-frame contention phase, having at least a second station contend to
interrupt the burst transmission with a second transmission by signaling a priority level
associated with the second transmission; and

having the first station interrupt the burst transmission in the event that the priority level
signaled by the second station is higher than the priority level of the burst transmission.

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~~17~~. (Original) The method of claim ~~16~~ wherein having the first station signal that the
first station desires contention free access comprises setting a contention control indicator.

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~~18~~. (Original) The method of claim ~~16~~ further comprising having the first station resume
the burst transmission in the event that no other station contends with a higher priority during the
inter-frame contention phase.

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~~19~~. (Original) The method of claim ~~16~~ wherein the frames of the burst transmission
comprise segments of a segmented MAC service data unit.

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¹²
~~20~~. (Original) The method of claim ⁸~~16~~ wherein the first and second station signal the priority level of their transmissions by signaling during predetermined priority slots during the inter-frame contention phase.

¹³
~~21~~. (Amended) A method of operating a media access control unit for reducing latency of transmission by stations on a shared access medium, wherein one such medium access control unit is associated with each of a plurality of stations, ~~and wherein the medium access control unit has the capability of~~ the method comprising:

- beginning a burst transmission of frames;
- associating one of multiple priority levels with the burst transmission;
- providing an inter-frame contention phase between frames;
- during the inter-frame contention phase, having the station transmitting the burst transmission signal the priority level of the burst transmission and signal that the station desires contention-free access to complete the burst transmission;
- during the inter-frame contention phase, having the station transmitting the burst transmission listen for the priority level of another station contending to interrupt the burst transmission with a second transmission; and
- interrupting the burst transmission in the event that the priority level signaled by the other station is higher than the priority level of the burst transmission. --

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~~22~~. (Amended) The method ~~media access control unit~~ of claim ¹³~~21~~ wherein having the station signal that the station desires contention free access comprises setting a contention control indicator.

¹⁵
~~23~~. (Amended) The method ~~media access control unit~~ of claim ¹³~~21~~ further ~~[[comprises]]~~ comprising resuming the burst transmission in the event that no other station contends with a higher priority during the inter-frame contention phase.

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¹⁶24. (Amended) The method ~~media access control unit~~ of claim ¹³21 wherein the frames of the burst transmission comprise segments of a segmented MAC service data unit.

¹⁷25. (Amended) The method ~~media access control unit~~ of claim ¹³21 wherein station signal the priority level of a transmissions by signaling during predetermined priority slots during the inter-frame contention phase.
